

Minutes of the Federal Interagency Committee on Indoor Air Quality
CIAQ Quarterly Meeting: Wednesday, 21 January 2004
[Room 152, 1310 L St., NW, Washington, DC 20005-4113]

~ AGENDA ~

1:00 pm **Welcome and Introductions:** Tom Kelly, EPA Co-Chair

1:10 pm **Radon Request,** Elizabeth Cotsworth, Director/ORIA

1:15 pm **IAQ Updates from CIAQ Member Departments and Agencies**

- 1 National Institute of Standards & Technology (NIST)
 * IAQ Activities, etc., Andy Persily
- 2 Consumer Product safety Commission (CPSC)
 * IAQ Activities, etc., Treye Thomas
- 3 Department of Housing & Urban Development (HUD)
 * Healthy Homes Activities, Ellen Taylor
- 4 Department of Energy (DOE)
 * IAQ Activities, etc., Terry Logee
- 5 Environmental Protection Agency (EPA)
 * Indoor Environments Division (IED) Activities, Tom Kelly
 * Partnership for Clean Indoor Air, Brenda Doroski
 * IAQ/Energy Star Label for New Homes, Dave Price

1:45 pm **Presentation and Discussion:** *DOE's Humidity Control Technology Showcase Trailer: 2003 Experiences w/ORNL and 2004 Opportunities for CIAQ*, by Douglas (Doug) Kosar, University of Illinois at Chicago (UIC). Contact Doug via email (dkosar@uic.edu) for copies of his presentation and other information regarding this topic. The presentation efile was too large to include here.

For more information about CIAQ, visit <http://www.epa.gov/iaq/ciaq/index.html>, or contact Philip Jalbert, EPA Indoor Environments Division (IED), Office of Radiation and Indoor Air (ORIA)(jalbert.philip@epa.gov, 202.343.9431).

Radon Request to CIAQ, by Elizabeth Cotsworth, Director/ORIA-EPA. The following is the email version of Ms. Cotsworth's request (sent one week following the CIAQ meeting), sent to the CIAQ members by Phil Jalbert.

Wednesday, January 28th 2004. This email is being sent to CIAQ Co-Chairs, Department-Agency Points-of-Contact (POC) and Federal members generally.

Recipients:

On Wednesday, January 21st, Ms. Elizabeth Cotsworth, Director of EPA's Office of Radiation and Indoor Air (ORIA) initially made this request during the CIAQ quarterly meeting. The purpose of this follow-up email is to reiterate that request and ask you, as a CIAQ member or other Federal agency, for your cooperation. EPA is updating its information on what Federal departments and agencies currently have in the way of standards, regulations, guidance, policies and procedures involving radon in indoor air. The information we're asking for may involve internal client programs or operations (e.g., agency owned staff housing or

employee relocation) and external client programs or operations (e.g., health and safety mortgage provisions, or workplace safety standards).

We believe that it's important to show that the Federal government has acted to reduce radon risks, and what it is we've done. Leading by example is important to persuading others to take action on radon. For example, HUD is adding radon language to its FHA home inspection disclosure form. The U.S. Army builds family housing radon-resistant in high potential radon areas. OSHA requires employers to post a sign where radon concentrations are elevated. A summary of what EPA knows about your Department-Agency's radon activities is attached; although it's not a comprehensive list.

Radon in indoor air is a serious public health problem. It's the second leading cause of lung cancer after smoking. Our recent *EPA Assessment of Risks from Radon in Homes* estimates that about 21,000 lung-cancer deaths each year are radon-related. EPA's risk assessment is a refinement of the National Research Council's (NRC) 1999 report on the *Health Effects Of Exposure To Radon*, also known as the BEIR VI report (biological effects of ionizing radiation). Radon represents a more serious risk than EPA had previously estimated.

Also, it might interest you to know that each year EPA celebrates National Radon Action Month during January. For the first time this year, the Office of the Federal Environmental Executive (OFEE) posted a notice about National Radon Action Month on their website and through their list-serve. We appreciate OFEE having taken that action. Also, SBA sent its employees an email encouraging them to test and fix their homes. Visit www.epa.gov/radon/ for more information on radon and EPA's related resources, educational tools and programs.

I would appreciate receiving a consolidated response from your agency's POC (or designee-see attachment) via email by March 1st. To help facilitate your identifying these activities, I've also attached a (albeit brief) membership list for the Interagency Steering Committee on Radiation Standards (ISCORS). ISCORS members may know of radon related standards, regulations, guidance, policies and procedures within their agencies. I look forward to receiving by March 1st any information you can provide about your department or agency's existing standards, regulations, guidance, policies or procedures involving radon in indoor air. The Agency appreciates your prompt attention to this request. If you have questions, please contact me. Thank you.

***The following ISCORS listing was an attachment to the original email of January 28th 2004 (above).**

ISCORS – Interagency Steering Committee on Radiation Standards

Visit the ISCORS website for more detailed information (<http://www.iscors.org/>). ISCORS principal agencies and points-of-contact (as of 19-December-2003):

Member Co-Chairs

EPA Co-Chair	Frank Marcinowski	marcinowski.frank@epa.gov
	Director, Radiation Protection Division	
NRC Co-Chair	John Greeves	JTG1@nrc.gov
	Director, Division of Waste Management	

Members

DOE-Department of Energy	Andy Wallo	Andrew.Wallo@hq.doe.gov
HHS-Health & Human Svcs	John McCrohen	JLM@CDRH.FDA.GOV
DOL-Department of Labor	Dave Hamel	Hamel.dave@dol.gov
DOD-Dept. of Defense	Mike Schaeffer	Dennis.Schaeffer@dra.mil
DOT-Dept. of Transportation	Fred Ferate	Fred.Ferate@rspa.dot.gov
	Rick Boyle	Rick.Boyle@rspa.dot.gov

***The following list of Federal Family Radon Policies & Activities was an attachment to the original email of January 28th 2004 (above).**

Leading By Example (as of 16 December 2003), Federal Family Radon Policies & Activities

HUD-Housing & Urban Development

- 1-Radon mitigation is eligible under 203(k) health & safety provisions
- 2-FHA advisory statement (pending)
- 3-Healthy Homes program; recognizes radon as an important home hazard; some grantees include radon
- 4-Will assist state-local governments on an as-needed/requested basis.
- 5-*Buying Your Home: Settlement Costs and Helpful Information*, mentions radon as a potential concern.
- 6-The Office of Native American Programs (ONAP) has included radon in air/drinking water in conference training materials for Native Americans.
- 7-Field offices have distributed EPA radon materials (e.g., *Home Buyer's and Seller's Guide to Radon*) to consumers and via homeownership fairs, etc.
- 8-*Help Yourself To A Healthy Home*. This recent HUD booklet includes a short section on radon (p8), and can be viewed at <http://www.hud.gov/offices/lead/helpyourself/index.cfm>.

FDIC-Federal Deposit Insurance Corporation

- 1-Identifies Lines 1301, 1302 in the HUD-1 & HUD-1A as appropriate for listing radon inspection fee(s).

Freddie Mac* / Fannie Mae**

- 1-****Mentions radon three times in *Consumer Home Inspection Kit* (p.3, 16,32).**
- 2-***Provides informal guidance on testing (mitigation) in multi-family housing.**

Defense

- 1-ArmyNavy build family housing in Zone 1 radon-resistant (USACE).

Occupational Safety and Health Administration

- 1-Relative risk information included on OSHA website.
- 2-Regulations require employers to post an Airborne Radioactivity Area sign where radon exceeds 7.5 pCi/l (29 CFR 1910.1096(e)(4)(i)(b))(October 1992).

USDA-Department of Agriculture

- 1-Cooperative partnership w/EPA on Healthy Indoor Air

***The following list of CIAQ Member Agency POC's was an attachment to the original email of January 28th 2004 (above).**

CIAQ Department and Agency Points of Contact (POC)

BPA	Eileen Jensen	360-619-6748	nejensen@bpa.gov
GSA	Lee Salviski	202-501-0909	lee.salviski@gas.gov
NASA	Cathy Angotti	202-358-1794	cangotti@hq.nasa.gov
TVA	Catherine Shea	256-386-2191	cshea@tva.gov
Navy	Trinh Do	703-723-1943	dotn@nfesc.navy.mil
NIST	Andrew Persily	301-975-6418	andrew.persily@nist.gov
HUD	Dana Bres	202-708-4370x5919	dana_b._bres@hud.gov
AirForce	Peter Breed	202-767-4317	
CPSC	Trey Thomas	301-5-4-7738	tthomas@cpsc.gov
Commerce	Peter Wixted	202-482-3444	pwixted@doc.gov
NPS	David Bleicher	202-619-7358	David_P_Bleicher@nps.gov
Justice	Dawn Gunning	202-353-0761	dawn.m.gunning@usdoj.gov
CDC	Kenneth Wallingford	513-841-4327	kmw2@cdc.gov
OSHA	Rex Tingle	202-693-1926	rex.tingle@osha.gov
State	Ron Martin	703-875-7107	martinrg@state.gov
DOT	Arnold Konheim	202-366-4849	arnold.konheim@ost.dot.gov

1-NIST (and ASHRAE Standard 62) Update, by Andy Persily

NIST is hours away from releasing version 2.1 of CONTAM. The primary changes include the ability to import exterior pressure and contaminant data from an exterior plume (or similar) model and improvements in the ability to model HVAC controls. It is available for download from the NIST Multizone Modeling website at <http://www.bfrl.nist.gov/IAQanalysis/default.htm>.

Recent Publications: The following are/will soon be available:

- “CONTAMW/X2.1 Supplemental User Guide and Program Documentation” – NISTIR 7049
- “Air and Pollutant Transport from Attached Garages to Residential Living Spaces” – NISTIR 7072 (and paper in December 2003 issue of International Journal of Ventilation)
- “Deposition Rates of Fine and Coarse Particles in Residential Buildings: Literature Review and Measurements in an Occupied Townhouse” – NISTIR 7068
- “Simulation of Indoor Air Quality and Ventilation Impacts of Demand Controlled Ventilation in Commercial & Institutional Buildings” – AIVC BETEC '03 Conference Proceedings
- “Impact of Natural Ventilation Strategies and Design Issues for California Applications, Including Input to ASHRAE Standard 62 and California Title 24” – NISTIR 7062
- “Concentrations and Source Strengths of Ultrafine and Fine Particles Due to Cooking in an Occupied Townhouse” – approved for publication in *Environmental Science & Technology*
- “Transient Analysis of Volatile Organic Compound Concentrations for Estimating Emission Rates” – *Atmospheric Environment* 37: 5505-5516.

BASE Ventilation Data: NIST is continuing to analyze the ventilation data collected as part of the EPA BASE study of 100 office buildings. We are focusing on outdoor air intake rates, supply airflow rates and how building factors affect these rates. HUD projects: NIST is continuing a number of projects funded by the Healthy Homes Initiative and the Office of Policy Development and Research. The current highlights include:

- Definition of a set of residential buildings that represent the US residential housing stock. A paper on this effort was presented last week in Washington at the AIVC (Air Infiltration and Ventilation Centre) conference.
- Study of airflow & contaminant transport from attached garages in single-family residences.
 - The 1st phase, which consisted of a literature review and field measurements of the airtightness of several attached garages, has been completed and the report has been published. The next phase consists of model simulations.
- Project is also supporting codes & standards development to support overall objectives of Healthy Homes Initiative. To that end, a new standard has recently been published by ASTM, E2267 Guide for Specifying and Evaluating Performance of Single Family Attached and Detached Dwellings - Indoor Air Quality.

NIST test facilities:

30 m³ stainless steel chamber



Double-wide manufactured house



85 m³ single room test house



ASHRAE STANDARD 62:

With respect to the current Standard 62, the addendum revising the Ventilation Rate Procedure, 62n, is now available for free download from the ASHRAE website. It is being submitted to ANSI (American National Standards Institute) for their approval, which could also be appealed.

The residential version of Standard 62, designated as 62.2, has been published and is available for sale from ASHRAE. It is also moving on to ANSI for their approval. The 62.2 committee will continue working on a companion guideline and will begin working on various addenda to the Standard. For more information, contact Steven Emmerich at 301-975-6459 or steven.emmerich@nist.gov.

2-CPSC UPDATE-Consumer Product Safety Commission, by Treye Thomas

Combustion Appliances

- Staff has ongoing Office of Hazard Identification and Reduction (EXHR)/Office of Compliance activities evaluating performance of CO alarms
- Reviewing performance of units, alarm response at various CO levels and non-UL 2034 specified alarm mandatory test conditions....
 - CPSC staff is working on a status report on non-longterm Compliance test results and EXHR dynamic conditions test results
- Staff has ongoing project examining electrical generators.
 - Special emphasis on preventing large number of CO related deaths
 - Hazard when used as emergency power source during storms etc.
 - Performing laboratory tests to evaluate CO emission profile, oxygen depletion, and possibly also hydrocarbon/VOC exposure.
 - Goal is to obtain technological fix to prevent harmful exposures
 - Auto cut off etc.
 - Staff is participating in development of draft UL generator standard and in addition to CO hazard.
 - Reviewing aspects of electrocution and thermal burns.

Arts and Crafts Safety Booklet

- CPSC is collaborating with EPA, Arts and Crafts Material Institute (ACMI), National Art Education Association (NAEA), and Monona Rossol, Author and Safety expert to create an arts and crafts safety booklet on basic hygiene and safety.

- Designed to assist artists, teachers, and students in understanding the hazards associated with the use of art materials, and ways to reduce the risk adverse health effects resulting from the use of these products
- Discusses the importance of proper ventilation and the use of respirators to minimize exposures to potentially harmful compounds
- Collaborators will begin reviewing this document at the end of the year
- Booklet should be completed in Summer 2004.
- Please contact Johnathan Midgett at jmidgett@cpsc.gov for any additional information.

School Safety Booklet

- Booklet contains safety procedures to be implemented during ordering, storage, use, and disposal of chemicals.
 - Intended to be used by teachers and students.
- Portions of the booklet were written by CPSC, EPA (toxics and waste) and NIOSH (workplace safety)
- CPSC and NIOSH contributions are available, EPA contribution should be available soon.
- Integrated draft for internal clearances may be available by the end of October, 2003.
- Contact Patricia Clutton at pclutton@cpsc.gov for additional information.
 - Patricia requests data on effects of dry erase markers

3-HUD UPDATE-Housing and Urban Development, by Ellen Taylor

4-DOE UPDATE-Department of Energy, by Terry Logee, Building Technologies Program

The fourth public review on ASHRAE's residential ventilation standard closed on December 23, 2002. Only limited sections of the standard were subject to review. Twenty-eight comments were received from seven commentors. Responses are being drafted and will be voted on during the meeting this January.

LBNL and the Helsinki University of Technology initiated collaborative work on incorporation of health and productivity effects in cost benefit modeling related to building design and operation. This work is part of a broader effort by a Task Force of the International Society of Indoor Air Quality and Climate (ISIAQ). Work to date has included: a) development of the model framework, b) assessing the availability of information needed to develop quantitative relationships between IEQ conditions and health / productivity and between health and productivity outcomes and financial outcomes; and c) detailed reviews of the relationships between office temperature and work performance and between ventilation rates and absence. Work on example cost benefit analyses of economizer systems and nighttime ventilation and cooling is underway.

DOE is initiating a new project focusing on ventilation of classrooms. A substantial emphasis will be on an evaluation and demonstration of quiet, energy efficient HVAC technologies that can provide the currently recommended minimum ventilation rates. Discussions with a major classroom HVAC manufacturer are underway to specify the technologies that will be evaluated.

LBNL continued analyses of the EPA BASE data set to examine the relationships of SBS symptoms with indicators of contamination or maintenance quality in HVAC systems, with moisture problems in buildings, and with space cleaning practices. Data analysis models are being expanded to enable control for a range of potential confounding factors.

LBNL and NIST initiated collaborative research on ventilation and pollutant concentrations in a new manufactured house set up at NIST as a research facility. Formaldehyde and VOCs are being measured monthly. Concentrations of many predominant VOCs have remained relatively stable over the last four months with larger variations observed for formaldehyde.

LBNL continued to serve on the National Academy of Sciences Committee on Damp Indoor Spaces and Health. First drafts were completed on two chapters of the committee's report.

We published the following papers:

Seppanen, O and Fisk WJ (2002) Association of ventilation system type with SBS symptoms in office workers. *Indoor Air* 12: 98-112.

Fisk WJ, Faulkner D, Palonen J, Seppanen O (2002) Performance and cost of particle air filtration technologies. *Indoor Air* 12: 223-234.

Hodgson AT, Beal D, McIlvaine JER (2002) Sources of formaldehyde, other aldehydes, and terpenes in a new manufactured house. *Indoor Air* 12: 235-242.

Late Breaking News:

The DOE-LBNL IAQ web site is live at: <http://eetd.lbl.gov/ied/viaq/viaq.html> There are four topics on this web site, Ventilation Rates and Technologies, Indoor VOC's, Sick Building Syndrome and Filtration for Particles and Other Pollutants. There is a reference section and a lengthy list of publications, many downloadable in PDF.

5-EPA Update for CIAQ by Tom Kelly

A-ETS / Smoke-free Homes

Top EPA Management Sign Smoke-free Home Pledge. On December 9, Administrator Leavitt and Assistant Administrator Jeff Holmstead took the pledge and signed a large certificate to keep their home and car smoke-free. Administrator Leavitt is a former Legacy Foundation Board member, a tobacco control organization created with Master Settlement Agreement funds from the tobacco industry.

Through November 2003, we have tracked more than 17,000 pledges. November had 944 pledges, which includes several very successful smoke-free homes pledge drives by the National Association of Counties (DC), EPA Region 5 (IL), Southeastern Ohio Regional Tobacco Consortium (OH), Licking County Department of Health (OH), and Hernando County Department of Health (FL). To date, the My Mom's My Hero PSA received a total of \$10.7 million in donated media, 102,759 TV-radio airings, and 23 posted airport dioramas.

EPA is about to start planning a Smoke-free Homes pledge campaign for EPA employees, and eventually enlisting other Federal agencies to do the same. With the help of a contractor, First Moments, EPA is starting a major outreach campaign to reach 5,000 Women/Infants/Children Centers with the Smoke-free Homes message. It will equip counselors with strong and effective information they can use with their diverse, underserved, and low-income clients. EPA is also beginning a formal collaboration with Headstart to reach low-income parents with the Smoke-free Homes message. Headstart is very enthusiastic about this idea.

B-IAQ

Public Review of Proposed Indoor Air Quality/Energy Star Label for New Homes. This proposed new program will offer homebuilders that meet specific indoor air quality specifications for new home construction the opportunity to obtain an IAQ label comparable to the existing Energy Star label for new homes. This initiative is being jointly developed by the Energy Star new homes program and the Indoor Environments Division. On Friday, January 9th, the Indoor Environments Division posted on its web site, information and draft materials and specifications (http://www.epa.gov/iaq/energystar/label_specifications.html). Comments are

being solicited from interested organizations and individuals for 60 days (comments are due March 12, 2004). The proposed IAQ label for new homes is expected to generate significant interest and comment from homebuilders and other organizations.

The Partnership for Clean Indoor Air. The Partnership, being led by EPA, was launched at the World Summit on Sustainable Development in Johannesburg (2002) to address the increased environmental health risk faced by more than 2 billion people in the developing world who burn traditional biomass fuels (e.g., wood, dung, crop residues) indoors for cooking and heating. According to the World Health Organization, their increased exposure results in an estimated 2 million premature deaths each year, largely among women and children. These practices are also associated with adverse pregnancies (e.g., stillbirth and low-weight babies) and may increase by 2-6 times a young child's risk of serious respiratory infection.

The Partnership is bringing together governments, industry and non-governmental organizations to increase the use of affordable, reliable, clean, efficient, and safe home cooking and heating practices. The Partnership's goal is to halve mortality related to indoor air pollution in targeted areas.

C-MOLD

Mold Website URL. IED has shortened the web address for mold information - epa.gov/mold. There will still be a "mirror" site (the same information on both sites) for mold at its old location, so that there are no broken links from bookmarks or referrals from other publications, etc., <http://www.epa.gov/iaq/molds/index.html>.

D-RADON

Radon Featured in Health Physics News. The cover story in the January issue of the Health Physics Society's newsletter features the *EPA Assessment of Risks from Radon in Homes* (402-R-03-003 June 2003). The eight-page interview style article with Jerry Puskin (RPD) and Phil Jalbert (IED) discusses the Agency's latest findings on radon risk and its implications for homeowners.

January is National Radon Action Month (NRAM). During January, ORIA will undertake several key activities to raise awareness and increase action on radon. For example, we are releasing a new radon public service announcement, a video news release designed to generate local television stories, a children's poster contest and award ceremony, and several activities designed to result in press coverage of this important health topic. On Tuesday, January 13th, Administrator Leavitt and Jeff Holmstead honored the young winners of this year's national radon poster contest.

E-ASTHMA

EPA Region 2 (NY) Asthma Grantees Forum. EPA's New York Regional office held its second Asthma Grantees Forum on Jan 13th. The forum brings together past and present grantees for networking and learning about what's worked, obstacles and effective strategies, education and outreach materials and funding opportunities.

F-SCHOOLS

Tools for Schools Presentation for DC Public Schools. On Jan. 14, DC Public Schools (DCPS) has invited the *Indoor Air Quality Tools for Schools (IAQ TFS)* Program to give a presentation introducing 200 DCPS principals to indoor air quality issues and how *IAQ TFS* can help. After years of persistent work by Region 3 staff, DCPS has agreed to implement *IAQ TFS* throughout its district. DCPS has 167 facilities serving over 65,000 students and is one of the 50 largest school districts in the U.S.

G-ORD's Mike Osbourne Retired. Michael Osbourne, the Branch Chief for the Indoor Environments Management Branch in EPA's Office of Research and Development (ORD, RTP NC) retired in December. Mike has been replaced on an acting basis by Bob Thompson of the Indoor Environments Division, Office of Radiation and Indoor Air (ORIA, DC). Bob will serve as the acting Branch Chief through May 12th. He can be reached at thompson.bob@epa.gov.

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